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09/925,397

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EXAMINER

EHICHIOYA, FRED I

ART UNIT

2172

PAPER NUMBER

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/925,397

Applicant(s)

CHANG ET AL.

Examiner

Fred I. Ehichioya

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 - 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1 – 19 are pending.
2. The rejection of claim 10 under 35 U.S.C. 101 as being directed to non-statutory subject matter has been withdrawn as necessitated by amendment.

***Declaration Under 35 USC § 131***

3. The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the "MediaNet: A multimedia Information Network for Knowledge Representation", In Conference on Internet Multimedia Management Systems. Vol. 4210 (numbered Pages 1 – 12), Boston, MA, Nov. 2000, 1 ST/SPIE.00, Author: Ana B. Benitez et al" reference to either a constructive reduction to practice or an actual reduction to practice.

4. The following is a quotation of 35 U.S.C. 715.07(x) which forms the basis for diligence set forth in this Office action:

What is meant by diligence is brought out in *Christie v. Seybold*, 1893 C.D. 515, 64 O.G. 1650 (6th Cir. 1893). In patent law, an inventor is either diligent at a given time or he is not diligent; there are no degrees of diligence. An applicant may be diligent within the meaning of the patent law when he or she is doing nothing, if his or her lack of activity is excused. Note, however, that the record must set forth an explanation or excuse for the inactivity; the USPTO or courts will not speculate on possible explanations for delay or inactivity. See *In re Nelson*, 420 F.2d 1079, 164 USPQ 458 (CCPA 1970). Diligence must be judged on the basis of the particular facts in each case. See MPEP § 2138.06 for a detailed discussion of the diligence requirement for proving prior invention.

5. A general allegation that the invention was completed prior to the date of the reference is not sufficient. *Ex parte Saunders*. ; 1883 C.D. 23, 23 O.G. 1224 (Comm'r Pat. 1883). Similarly, a declaration by the inventor to the effect that his or her invention

was conceived or reduced to practice prior to the reference data, without a statement of facts demonstrating the correctness of the conclusion, is insufficient to satisfy 37 CFR 1.131.

While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897).

6. At page 2, paragraph 2 of the affidavit, the claimant states:

"Prior to November 6, 2000, we have conceived the claimed invention of the application. A Provisional Patent Application Serial No. 60/246,052 was filed on, November 6, 2000, with the USPTO. John R. Smith is the common inventor to the present application and the provisional '052 application. The '052 application as filed is attached herewith Exhibit A."

7. The evidence submitted is insufficient to establish applicant's alleged actual reduction to practice of the invention in this country or a NAFTA or WTO member country after the effective date of the Benitez reference.

The following is a quotation of 35 U.S.C. 715.07 which forms the basis for the explanation of the affidavit set forth in this Office action:

The affidavit or declaration and exhibits must clearly explain which facts or data applicant is relying on to show completion of his or her invention prior to the particular date. Vague and general statements in broad terms about what the exhibits describe along with a general assertion that the exhibits describe a reduction to practice "amounts essentially to mere pleading, unsupported by proof or a showing of facts" and, thus, does not satisfy the requirements of 37 CFR 1.131(b). *In re Borkowski*, 505 F.2d 713, 184 USPQ 29 (CCPA 1974). Applicant must give a clear explanation of the exhibits pointing out exactly what facts are established and relied on by applicant. 505 F.2d at 718-19, 184 USPQ at 33. See also *In re Harry*, 333 F.2d 920, 142 USPC 164 (CCPA 1964) (Affidavit "asserts that facts exist but does not tell what they are or when they occurred.").

8. There was no indication as to which portions of Exhibit A of the affidavit are related to the various phrases in independent claims 1, 10 and 11 of the patent application. Particularly, the elements of claim 10 are not in Exhibit A. The applicant should provide a correlation on how various statements in the affidavit apply to these claims. The display of examples of commands does not in itself provide a correlation between the display and elements of the claims in the proposed invention.

For these reasons, the "Affidavit Under 37 C. F. R. § 1.131" has been disallowed.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Non-Patent Document: "MediaNet: A multimedia Information Network for Knowledge Representation", In Conference on Internet Multimedia Management Systems. Vol. 4210 (numbered Pages 1 – 12), Boston, MA, Nov. 2000, 1 ST/SPIE.00, Author: Benitez et al (hereinafter "Benitez") in view of Non-Patent Document: "Supporting Ranked Boolean Similarity Queries in MARS", IEEE Trans. on Knowledge and data Engineering, 10, Nov – Dec. 1998, Author: Ortega et al (hereinafter "Ortega").

Regarding claims 1 and 11, Benitez teaches a method for querying stored multimedia data in a computer system, comprising:

translating, in said intermediate level, said high-level concept into low-level queries by using system pre-defined high-level concepts (see section 3 "Typical content-based. In the database or are used in the retrieval" and section 4.2 page 8 "The extended content-based, ..... the procedure is shown in Figure 1"); and

transferring said low-level queries to a low level comprising one or more search engines; said one or more search engines performing a query of the stored multimedia information using said low-level queries (see section 4.2, page 9, "At this point ..... and the results integrated into a unique list as described for visual queries").

Benitez does not explicitly teach receiving into an intermediate level a high-level concept from a user describing data to be retrieved.

Ortega teaches receiving into an intermediate level a high-level concept from a user describing data to be retrieved (see section 1.2, page 4, and paragraph 1, "A Boolean ... image databases").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Ortega with the teaching of Benitez wherein high level concepts can be expressed as a Boolean combination of lower level features. The motivation is that the user for the support of conceptual queries can provide such mapping of high to low level concepts explicitly.

11. Claims 2 – 10, and 12 - 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benitez in view of Ortega and further in view of Non-Patent Document: "CAMEL: Concept Annotated image Libraries", In Storage and Retrieval for Image and Video Database, San Jose, CA, Jan. 2001. SPIE (numbered pages 1 – 12), Author: Natsev et al (hereinafter "Natsev").

Regarding claims 2 and 12, Benitez and Ortega disclose the claimed subject matter as discussed in claims 1 and 11 respectively. Benitez or Ortega does not explicitly teach wherein said intermediate level comprises: a set of library modules, said set of library modules comprising: a concept library module for storing concepts; one or more library modules adapted to store said data from said one or more data sources; a cataloger module adapted to construct a new concept from said high-level concept using data from said concept library and library modules, thereby

creating a concept construct, and to pass said concept construct to said concept library module for storage as a concept; and an interpreter module adapted to translate said high-level concept into low-level queries using said concepts stored in said construct library and to pass said low-level queries to said one or more search engines.

Netsev teaches wherein said intermediate level comprises: a set of library modules, said set of library modules comprising:

- a concept library module for storing concepts (see abstract, page 1);

- one or more library modules adapted to store said data from said one or more data sources (see figure 1, section 1.2 paragraph 3, page 3 – page 4, paragraph 1, “The concept Library is a module for persistent storage of concepts. ...terminology”);

- a cataloger module adapted to construct a new concept from said high-level concept using data from said concept library and library modules, thereby creating a concept construct, and to pass said concept construct to said concept library module for storage as a concept (see fig.3, section 1.2, page 3); and

- an interpreter module adapted to translate said high-level concept into low-level queries using said concepts stored in said construct library and to pass said low-level queries to said one or more search engines (see section 1.2 page 4 “The querying phase simply. ...keyword query”).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Natsev with the teaching of Benitez and Ortega wherein the concept interpreter looks up the representation of the visual

concept from the concept library and uses it to query the database for images containing the relevant concept. The motivation is that once a concept is defined, it can be used to search for relevant images without having annotated each and every one of them.

Regarding claims 3 and 13, Benitez, Ortega and Natsev disclose the claimed subject matter as discussed in claims 2 and 12 respectively. Ortega teaches wherein said set of library modules further comprises at least one library module selected from the group comprising: a matching algorithm library module adapted to store matching algorithms (see section 4.8, pages 20 and 21).

Benitez or Ortega does not explicitly teach a feature library module adapted to store multimedia features; and a constraint library module adapted to store feature constraints.

Natsev teaches a feature library module adapted to store multimedia features (see section 1.2, paragraph 2, page 3); and

a constraint library module adapted to store feature constraints (see section 5, pages 7 and 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Natsev with the teaching of Benitez and Ortega wherein the concept interpreter looks up the representation of the visual concept from the concept library and uses it to query the database for images containing the

relevant concept. The motivation is that once a concept is defined, it can be used to search for relevant images without having annotated each and every one of them.

Regarding claims 4 and 14, Natsev teaches wherein each said library module further comprises an application program interface to receive said data from a said data source (see section 4, page 7, "The last piece . . . in Figures 4 and 5.").

Regarding claims 5 and 15, Natsev teaches wherein said cataloger module further performs the steps of:

- selecting a set of concept features from said feature library module (see section 1.2, paragraph 2, page 3);

- selecting a set of concepts from said concept library module for use as child-concepts (see section 6, paragraph 3, page 11); and

- selecting a set of constraints on said child concepts from said constraint library module (see section 6, paragraph 3, page 11).

Regarding claims 6 and 16, Natsev teaches wherein said each said concept comprises a triplet of a set of child-concepts, a set of features, and a set of relationships (see section 6, paragraph 3, page 11, "Another improvement . . . ranked higher").

Regarding claims 7 and 17, Ortega teaches wherein said concepts comprise a hierarchical fuzzy graph data tree-structure comprising nodes, aggregation edges, and association edges and wherein: said nodes correspond to said concepts and said

features; said aggregation edges correspond to parent-child relationships; and said association edges correspond to said constraints (see section 4.1, pages 10 and 11).

Regarding claims 8 and 18, Ortega teaches wherein said edges are weighted (see section 4.2 page 11).

Regarding claims 9, 10 and 19, Ortega teaches a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for a matching algorithm, said method comprising:

GetNextMatch( ), AssignNextMatch( ), and ShiftNextMatch( ) procedures, wherein:

said GetNextMatch( ) procedure comprises the steps:

testqueue: if queue.Empty( );

return NULL,

head --> queue.Pop( );

if head.Complete( );

return head; head2 --> head.Copy( );

head2.AssignNextMatch( );

if head2.Valid( );

queue.Push(head2);

head.ShiftNextMatch( );

queue.Push(head);

Goto testqueue;

said AssignNextMatch( ) procedure comprises the steps:

child --> GetNextUnassigned( ); child.match\_ptr++;

if(child.match\_ptr == NULL), then; child.match\_ptr -->

child.GetNextMatch( );

Make child an assigned node;

said ShiftNextMatch( ) procedure comprises the steps:

Child --> GetNextUnassigned( );

child.match\_ptr++;

if(child.match\_ptr == NULL), then;

child.match\_ptr --> child.GetNextMatch( );

wherein variables head, head2, and child, all correspond to concept nodes; variable queue denotes a priority queue of the corresponding concept node; and match\_ptr is a pointer to the next possible match for a given concept node; Pop( ) is a method to get the next node off the priority queue; Push( ) is a method to put a node on the priority queue; Empty( ) is a method to check if the priority queue is empty; Copy( ) is a method to copy a node; Complete( ) is a method to check if the children assignment is complete; Valid( ) is a method to check if the children assignment meets the constraints; and GetNextUnassigned( ) is a method to select a variable that is unassigned (see sections 4.6 – 4.9; pages 15 – 26).

Nonfunctional descriptive material cannot render nonobvious an invention that would have otherwise been obvious. *Cf. In re Gulack*, 703 F.2d 1381, 1385, 217 UPPQ 401, 404, (Fed. Cir. 1983) (When descriptive material is not functionally

related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability). The difference between the prior art and the claimed invention is simply a rearrangement of non-functional descriptive material (MPEP 2106 VI). Applicants emphatically stated in the specification that Ortega discloses a similar problem solving algorithms which when evaluated give the same result as the current invention (pages 5 and 6 of the specification).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the algorithm of Ortega to perform the function of GetNextMatch( ), AssignNextMatch( ), and ShiftNextMatch( ) procedures.

### ***Conclusion***

**12. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

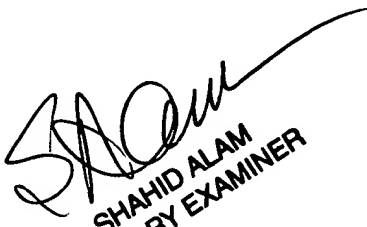
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 703-305-8039. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred I. Ehichioya  
Examiner  
Art Unit 2172  
June 9, 2004

  
SHAHID ALAM  
PRIMARY EXAMINER